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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/552,189

10/06/2005

Anthony John Barnes

SHP-PT075.1

8376

3624 7590 03/18/2008

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EXAMINER

ABOAGYE, MICHAEL

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

03/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/552,189 | Applicant(s) BARNES, ANTHONY JOHN | |
| | Examiner MICHAEL ABOAGYE | Art Unit 1793 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-28 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/28/08;04/25/06;10/06/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicants' election of Group II (claims 14-28) in the reply filed on February 12, 2008 is acknowledged. Because the applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 14-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Rosen et al. (US Patent no. 5,971,252).

Regarding claims 14 and 15, Rosen et al. teaches a blank comprising a parent body (item 32, figure 3c) and an insert (item 36, figure 3c) joined thereto by means of friction stir welding (abstract and column 3, lines 22-35), at least one of the parent body and the insert being made of a material which has superplastic properties (Note , Rosen et al. teaches joining aluminum alloys of the 700 series which are capable of undergoing superplastic forming (see, column 3, lines 36-44)).

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Regarding claims 16-26, Rosen et al. teaches a parent body in a form of a sheet; an insert of the same thickness as the parent body; an insert of a different thickness to the parent body; an insert which has a thickness greater than that of the parent body; an insert which has a thickness which is less than that of the parent body; wherein one or both surfaces of the insert are contoured (see, column 4, lines 5-10); wherein the thickness of the insert in the region of the joint line with the parent body is the same as that of the parent body (Note, in column 4, lines 5-15, Rosen et al. teaches, a filler or an insert contoured generally to the length, width and depth of the cut-out or trough in the parent body or metal, Rosen et al. also teaches the insert may not necessarily be shaped or machined precisely the same as the cut-out in the parent material, also see, item 34, figure 3c. The examiner interprets this to mean that, there can be variation in configuration of the insert and the cut-out in the parent body, where configuration may include shape, thickness and the like. Therefore, Rosen et al. teaching meets the thickness limitations); wherein the insert comprises that part of the blank which has superplastic properties; wherein material of the parent body also has superplastic properties, but to a lesser extent than those of the insert (Note, Rosen et al. in column 3, lines 1-15 and column 4, lines 4-10, teaches an insert material of same composition or compatible with the parent metal. The examiner interprets said material compatibility to imply either the insert is of higher or lesser superplastic properties than the parent metal); wherein the insert has a 3D shape which is preformed (Note figure 3c shows the insert and the parent body in 3D configuration). Regarding claim 25, said insert after welding to the parent

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body, plugs the crack and therefore should inherently reinforces the parent body, thus said insert carry's out a mechanical function.

4. Claims 14-17 and 22-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Colligan (US Patent no. 6537682).

Colligan teaches a blank comprising a parent body and an insert joined thereto by means of friction stir welding, at least one of the parent body and the insert being made of a material which has superplastic properties (Note, Colligan teaches a blank including a first, a second structural members (item 23a and item 23b, figure 7A) and an intermediate structural member(s) (item 23C, figure 7A), all said structural members being made of superplastic materials and joined together along abutted interface by friction stir welding. The examiner interprets said intermediate structural member(s) as an insert, and said first and second structural members as parent bodies. Therefore when the final blank assembly is formed said insert is located in between said first and second structural members. Note, also that in figures 5 and 5A the superplastic formed portion is limited to certain regions of the blank. Colligan also teaches at least a parent body in a form of a sheet; an insert having the same thickness as the parent body (see, items 23 (a, b, c) of figure 7A are of the same thickness); wherein the thickness of the insert in the region of the joint line with the parent body is the same as that of the parent body (see, items 23 (a, b, c) of figure 7A are of the same thickness). Regarding claim 24, Colligan teaches joining dissimilar superplastic material. This means that said dissimilar materials will necessarily exhibit different extent of superplasticity (see, column 3, lines 1-16).

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Colligan further teaches a 3D configures insert in 3D and also a blank comprising multiple inserts joined to said parent body by friction stir welding (Note, Colligan teaches a stack of structural members joined with multiple intermediate members (See, column 12, lines 1-10; figures 5, 5A, 7A and 7B).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Forrest et al. (US 699916), Alston et al. (US 5882756) and Kistner (US 6337471) are also cited in PTOI-892.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL ABOAGYE whose telephone number is (571)272-8165. The examiner can normally be reached on Mon - Fri 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private

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PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Assistant Examiner,
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Primary Examiner, Art Unit 1793